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ABSTRACT

Literature was reviewed for the purpose of locating an instrument or procedure for use in assessing children's readiness for the first grade. The major part of this report consists of annotated bibliographic citations concerning: (1) effects of age on school placement; (2) advisability of screening for readiness; (3) reviews of screening instruments; (4) observation and checklists for screening; and (5) programs providing developmental services. Findings of the studies are summarized. Concluding comments offer cautions and guidelines for assessing children's readiness for Grade 1. (RH)

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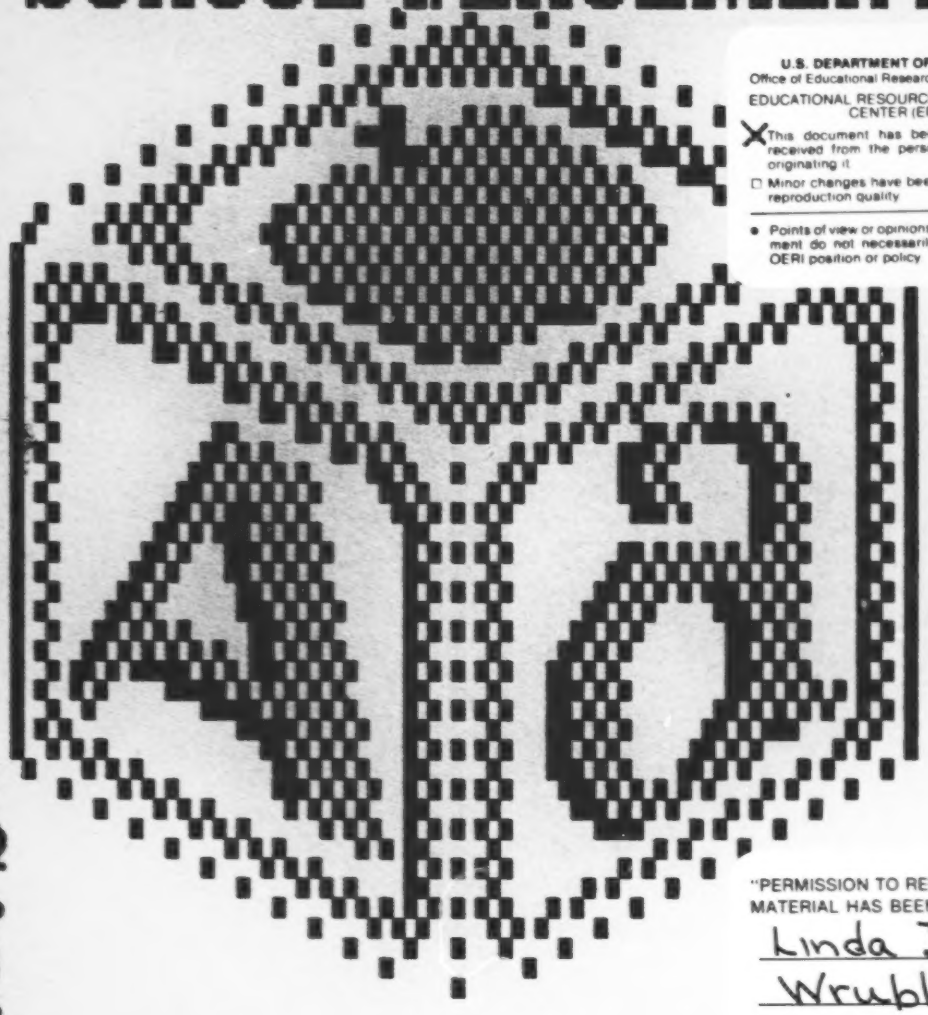
SCREENING FOR EARLY SCHOOL PLACEMENT



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AN ANNOTATED BIBLIOGRAPHY CONCERNING THE USE OF SCREENING FOR EARLY SCHOOL PLACEMENT

by

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Submitted in fulfillment of the requirements
for the course E591 - - Exit Project
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INTRODUCTION

In the sixteenth century an English educator wrote: " One of the first questions is at what age children should be sent to school, for they should neither be delayed too long, so that time is not lost, nor hastened too soon, at the risk of their health. The rule, therefore, must be given according to the strength of their bodies and the quickness of their wits jointly. What the age should be I cannot say, for ripeness in children does not always come at the same time." (Friesen, 1984)

In the early twentieth century Arnold Gesell, pediatrician and child psychologist, studied the developmental patterns of childhood. He identified certain behaviors associated with each stage of development. The Gesell Institute of Human Development was founded and worked out a Developmental Placement Program to help place only children developmentally ready in school.

The kindergarten and first grade teacher of the late twentieth century still receives a number of students each year with developmental lags. Each class has its assortment of mental ages, levels of emotional stability, and experiential backgrounds. The teacher knows that some are not ready and will experience "academic failure and damaged self-concepts." (Solem, 1981) A preschool screening program that would accurately identify every child not ready to begin and suggest specific remediation before the child enters the regular classroom would be the ideal.

STATEMENT OF THE PROBLEM

Children do not learn effectively until they have reached a stage of physical and psychological readiness. Readiness does not occur at the same chronological age in every child. Many screening instruments claim to assess readiness, but their reliability, validity, and degree of accuracy are questionable.

PURPOSE OF THE STUDY

This study has a dual purpose: to emphasize the ideal of having each child developmentally ready for school when he begins, and to warn educators against the belief that current screening instruments can accomplish that ideal without further extensive research.

ORGANIZATION OF THE STUDY

The first group of articles discusses the effects of age on school placement and achievement. The advisability of screening for readiness follows. Several articles review specific screening instruments and the use of observation and checklists for screening purposes. A few articles dealing with current programs attempting to service unready children complete the study.

LIMITATIONS OF THE STUDY

The study is not comprehensive. The number of screening instruments that could be reviewed for such a study is too great for one person to undertake. The available research on the issue of readiness is far from objective. The studies reported were conducted by different methods and yielded different information so that comparisons were hard to make. Therefore, the conclusion of each study was accepted as stated and not further evaluated.

GLOSSARY

chronological age - age based on number of years from birth.

correlation - two different tests given to the same group of students yielding similar results.

developmental age - age based on level of behavior displayed by the child rather than on years from birth.

developmental first grade - first grade designed to teach readiness skills and prepare a child for the regular first grade curriculum.

developmental kindergarten - kindergarten emphasizing preschool skills in preparation for regular kindergarten.

developmental placement - school entrance or grade level determined by developmental age rather than chronological age.

false negative - test does not identify a child who is at risk and problems remain undetected.

false positive - test identifies a child who is not really at risk and causes mislabeling.

high risk or at risk - child who will probably experience failure or need special services.

practical significance - test accuracy is high enough to make the use of the test feasible.

reliability - the test will yield similar results each time it is given under similar circumstances.

school readiness - ability to handle the demands of the school setting.

screening - procedure to predetermine a child's stage of development.

statistical significance - data concerning test accuracy are high, but may or may not be practical.

validity - the test measures what it claims to measure.

Ilg, Frances, L., Ames, Louise Bates, School Readiness: Behavior Tests Used at the Gesell Institute, Harper and Row, N.Y., 1972, pp. 15-18.

Ilg and Ames stated that any average age chosen for school readiness implied that only fifty percent of that group were truly ready because it is an average. They agreed that a five year old level of behavior for kindergarten and a six year old level of behavior for first grade is what is needed, but they disagreed that chronological age will guarantee that level of behavior. They made the point that intelligence is only one part of a child and is not related to behavioral maturity. This led to their belief that an instrument that would assess a child's developmental level would determine that child's readiness for school.

Ilg, Frances, L., Ames, Louise Bates, School Readiness: Behavior Tests Used at the Gesell Institute, Harper and Row, N.Y., 1972, pp. 19-27.

Ilg and Ames concluded from their work at the Gesell Institute: "The majority of children brought to us because of difficulties in school were found to be overplaced." This led to a 1957 study in Weston, Connecticut. Children in grades K - 3 were given a developmental screening examination, Rorschach and Lowenfeld Mosaic tests, and the Keystone Visual Skills. Each child was then ranked as ready, questionable, or unready on each test. Thirty percent to forty percent of the children were ranked questionable. All of the tests were given for three successive school years. The correlation between the predictions and actual school placement six years later was .74.

Wood, Chip, MSW, Powell, Sarah, MS, Knight, R. Chris, PhD, "Predicting School Readiness: The Validity of Developmental Age," Journal of Learning Disabilities, Jan., 1984, 17:8-11.

The authors believed that some children labeled "special needs" were mislabeled because their developmental readiness had not been considered. The Gesell School Readiness Test was in wide use as an instrument to determine developmental age, but, though carefully normed, had not been validated. The validity study was conducted on a population of all children eligible for kindergarten in a semi-rural, lower-middle class, predominantly white district that was not currently using any screening device. All children diagnosed as "special needs" independent of the researchers were considered failures. None of the children in this group had a developmental age of sixty months, the chronological age required by the district for school entrance. The researchers concluded that the chronological age of 4-6 year olds entering kindergarten does not relate to eventual success or failure and that the Gesell developmental screening procedure does make an effective prediction of success or failure. They also calculated that correct developmental placement would result in one-third to one-half of all eligible students being recommended as developmentally unready for kindergarten. Since the average developmental ages of children and the developmental level of kindergarten curricula vary from district to district, the exact developmental age used for recommending placement should be determined locally, but the best way to guarantee success for each individual child is to pay careful attention to developmental age at school entry.

Senior, Eileen M., "Learning Disabled or Merely Mislabeled?", Childhood Education, January-February, 1986, 62:161-165.

The developmentally young child was defined as a healthy child who developed more slowly in the early years than his peers. School placement with peers constituted overplacement which led to frustration. Behavior problems, reading difficulties, and short attention spans similar to those of a learning disabled child resulted. Retention (least desirable), developmental kindergarten, and developmental first grade were suggested alternatives to mislabeling and special education placement. It was concluded that developmentally young children deserve the opportunity to strive for excellence and educators need to make decisions and provide services to prevent overplacement.

Friesen, Don, "Too Much, Too Soon?", Principal, March, 1984, 63:14-18.

The Association of Elementary School Principals of Oklahoma researched the literature for pertinent studies regarding readiness to be used to influence the state legislature to change the entry-age law. Their search concluded that developmental age which considers sex, physical, social, emotional, and intellectual factors as interdependent and equally important was more valid for school placement than chronological age which considers birthdate alone. In addition to state entry-laws which keep a child from entering kindergarten until he is fully five, it was suggested that schools consider retention, preschool screening for readiness, and transitional first grade classes.

DiPasquale, Glenn W., PhD, Moule, Allan D., PhD, Flewelling, Robert W., PhD; "The Birthdate Effect", Journal of Learning Disabilities; May, 1980, 13:234-237.

There were two problems with previous research on the effect of birthdate on school success: care exercised in choosing the control group, and the use of teacher-assigned grades (too subjective) and standardized tests (often not truly representative of daily performance) as measures of success. This study used the referrals received by three members of Psychological Services in the York County Board of Education, Ontario, Canada. The sample consisted of 552 children in grades kindergarten through 13. Two conclusions were drawn from the study: the effect of birthdate was limited to boys, and the effect disappeared after the primary grades. It was suggested that younger children catch up to their peers, but the study did not provide data that indicated if this was due to maturation, grade retention, or intensive remediation. The need for further research and early detection of at-risk children was made clear by the study.

Hebbler, Kathleen M.; "Do Older Kindergartners Have an Advantage: The Importance of Month of Birth When Starting School", American Educational Research Association, Los Angeles, California; April, 1981; p.1-12 (ERIC ED 201 388).

This study confirmed the relationship between month of birth and skill level, but it found it small in magnitude. The relationship found did not show that older children learn more in school, but that they come to school knowing more to begin with. The results of the study were not strong enough to suggest that birth month alone should be used to determine school entrance.

May, Deborah C., EdD, Welch, Edward PhD, "Developmental Placement: Does It Prevent Future Learning Problems?", Journal of Learning Disabilities, June-July, 1984, 17:338-341.

Two hundred twenty-three children in a suburban New York elementary school were given the Gesell School Readiness Screening Test and coded as buy-a-year (BAY), overplaced (OP), or traditional (TR). They were then studied for number of referrals for remedial services, number of classifications as handicapped, number enrolled in gifted programs, number retained after second grade, and level of sixth grade reading placement. No significant differences were found. It seemed that being overplaced did not harm the children and that waiting for a year did not help. The researchers noted that the developmental placement theory needs to have much more objective, carefully controlled research done before conclusions can be drawn.

Gredler, Gilbert R., PhD, "A Look at Some Important Factors in Assessing Readiness for School," Journal of Learning Disabilities, May, 1978, 11:25-31.

Gredler disputed the claim that problems in school arise from over placement. He cited a study of children in ten schools who began school with equal predictions of reading success. Their actual performance in first grade varied considerably. Gredler felt that this showed a need to look at school factors rather that student readiness. He suggested that we allow all children to begin school and then develop a program to meet each individual's need. Diagnostic testing should be reserved for children demonstrating need for special help during instruction.

Gallenani, David, O'Regan, Myra, Reinherz, Helen; "Pre-kindergarten Screening: How Well Does It Predict Readiness for First Grade?", Psychology in the Schools, April, 1982, 19: 175-182.

Screening programs for young children have greatly increased as interest in early childhood education has increased. This study compared the results of several screening procedures to the kindergarten teacher ratings of readiness for first grade. Correct classification of the various instruments ranged from 45.6% to 75.9%. The study concluded that those responsible for the use of screening instruments must be very aware of the possibilities of mislabeling (false positives cause inappropriate labeling and false negatives lead to undetected, escalating problems) and that they should view the screening procedure only as a beginning in a process of in-depth assessment and intervention.

Hutchins, Elizabeth J., "A Pre-School Screening Examination and a Public School," Paper: American Education Research Association, Los Angeles, California, April, 1981 (ERIC ED 202 593).

The case study of a small, rural, New England elementary school using a preschool screening program was presented. Hutchins concluded that the screening program gave legitimacy to the kindergarten program increasing the teacher's self-confidence, that the screening results were used to adjust the pace and sequence of what individual children received from the curriculum, and that the screening led to more measurable educational objectives and more direct instruction.

Moore, C. Rochelle, Sunal, Cynthia S., "Screening and Assessment of Kindergarten Children with Developmental Risks," 1979.

One hundred five children were screened using teacher-made materials that assessed fifteen skill areas. Children scoring poorly in the spring were screened again in the fall. Those consistently low were carefully observed in the classroom for possible learning problems. Researchers concluded that poor performance in a skill area on the test was usually confirmed by poor classroom performance in that same area. However, they indicated that the procedure could not be validated without several years of follow-up after kindergarten and that the follow-up would have to include children found weak but not referred to special programs as well as those diagnosed and referred. Further research was called for regarding if screening tests accurately assess the entire population or just the at-risk child, if the results are being effectively used to guide curriculum and goal setting, and if the identified student is helped or hindered when the teacher is aware of the test results.

Book, Robert M., "Identification of Educationally At-Risk Children During the Kindergarten Year: A Four-Year Follow-up Study of Group Test Performance," Psychology in the Schools, April, 1980, 17:153-158.

Four hundred seventy-two kindergarten students in Salt Lake County, Utah comprised this study. Each child was given the Bender-Gestalt Test and the Kindergarten Evaluation of Learning Potential. Children judged to be below average by their teacher were also given the Slosson Intelligence Test. Those scoring 85 or less on the SIT were also given the Stanford-Binet Test. The findings of the study supported the predictive validity of a screening battery like the one used, but caution in using the scores was advised. Good teacher judgment should also be used. The study showed that at-risk students do not improve over the years without intervention programs that provide continuous support over several years. Screening was not recommended unless the end result was to be more effective educational programs and more research was called for.

Meisels, Samuel L., Developmental Screening in Early Childhood: A Guide, National Association for the Education of Young Children, Washington, D.C., 1985, pp. 5-9.

Meisels pointed out the differences he saw between developmental screening tests and school readiness tests. Developmental screening tests measure a child's ability to acquire skills. Poor performance points to a possible handicap that may hinder the child's current skill level of achievement. Readiness tests measure a child's current skill level. Poor performance may point to a lack of knowledge or experience rather than lack of potential. Meisels indicated that screening only identifies students who may have trouble in school. Diagnostic tests are necessary to identify specific special needs.

Meisels, Samuel J., Developmental Screening in Early Childhood: A Guide, National Association for the Education of Young Children, Washington, D.C., 1985, pp. 29-30.

Meisels said that development screening tests are not definitive or comprehensive. They simply alert parents and professionals to the need for more intensive assessments procedures. He gave the following list of limitations and possible abuses to look out for:

1. Data from screening should not be used as diagnostic information.
2. A screening instrument is not identical to a school entrance test.
3. Screening instruments are not intelligence tests.
4. Screening results should not be used to label a child.
5. Screening instruments used in a multicultural or multilingual setting should be sensitive to the effects of cultural differences and bilingualism.
6. Screening should always be followed by assessment, evaluation, and intervention.

Michigan State Board of Education, Superintendent's Early Childhood Study Group Report, Lansing, Michigan, September, 1984 (ERIC ED 260 844).

This study focused on preschool, regular and readiness kindergartens, and first grade readiness programs in the state of Michigan. Two of the recommendations of the report addressed the issue of screening. Recommendation 9 defined screening as "a process of confirming the development of a child by means of quickly and easily administered procedures. This process does not identify the nature of the problem, nor the reasons for it; screening merely indicates the existence of a condition that is not normally seen in the child's chronological age mates." It further states: "In order that programs are specifically designed for the advantages of children, the issue of reliable and appropriate screening must be addressed." Part of Recommendation 10 called for the Michigan Department of Education to provide local districts with a recommended list of instruments for screening.

Abrahamson, David S., Bell, Anne E.,"Assessment of the School Readiness Section of the Early Detection Inventory," Journal of School Psychology, 1979, 17:162-170.

Five hundred eight kindergarten children in four different schools representing varying socio-economic backgrounds and academic settings were given the School Readiness Section of the Early Detection Inventory (EDSR). Their probable first grade success was also predicted using their mental age and sensory/perceptual skill level. The EDSR appeared to be the most efficient predictor of reading achievement. The researchers concluded that more specific research was needed, but that the EDSR promised to be an effective instrument.

Kaplan, Howard B., "A Comparison of the Vane Kindergarten Test with the WPPSI and a Measure of Self-Control," Psychology in the Schools, July, 1985, 22:277-282.

The children in this study were individually administered the Wechsler Preschool and Primary Scale of Intelligence (WPPSI) which is not suitable for large group administration. They were also given the Vane Kindergarten Test (VKT). The Self-Control Rating Scales were used to determine if the VKT results were independent of the child's level of self control during the test. The study revealed strong correlation between the WPPSI and the VKT. It was concluded that the VKT could be an effective screening instrument. The relationship between the VKT and self-control could demonstrate a weakness in the VKT, but the authors felt this could not be concluded since this was the first such attempt to study self-control.

Chew, Alex L., Morris, John D., "Validation of the Lollipop Test: A Diagnostic Screening Test of School Readiness", Educational and Psychological Measurement, Winter, 1984, 44:987-991.

The Metropolitan Readiness Test (MRT) has been widely used as an instrument for predicting school readiness and was therefore used as the criterion for determining the validity of the Lollipop Test. The Lollipop Test was developed to meet the need for a readiness test that reduced time required to administer, pupil anxiety, and socio-economic bias. A correlation of .76 was found between the Lollipop and the MRT. This strong concurrent validity along with the non-threatening, individual nature of the test led to a positive recommendation by Chew and Morris.

Ilg, Frances L., Ames, Louise Bates, School Readiness: Behavior Tests Used at the Gesell Institute, Harper and Row, N.Y., 1972, p. 35.

Ilg and Ames summarized the developmental examination used at the Gesell Institute. At the initial interview the child was asked his age, his birthdate, some of his favorite birthday activities (best present, etc.), names and ages of his siblings, and his father's occupation. The paper and pencil tests consisted of the child writing his name and address and letters he could. The child was also asked to copy six basic forms (circle, cross, square, triangle, divided rectangle, and diamond), copy two 3-dimensional forms (cylinder and cube), and complete the "Incomplete Man" figure including facial expression. Right and left orientation was determined by the child naming parts of the body and carrying out single and double commands for motor responses. Form tests given were the Monroe Visual One for matching forms and the Monroe Visual Three for design memory. At the concluding interview the child was asked to report his favorite outdoor activity and his favorite indoor activity at home and at school. This was followed by an examination of the teeth and was sometimes supplemented by the Lowenfeld Mosaic.

Kaufman, Alan S., Kaufman, Nadeen L., "Tests Built From Piaget's and Gesell's Tasks as Predictors of First Grade Achievement" Child Development, 1972, 43:521-534.

Eighty kindergarten children were given the Gesell School Readiness Tests (GSRT), a battery built from Piaget's tasks, and the Lorge-Thorndike Intelligence Tests. They were given the Stanford Achievement Test at the end of first grade. The study found both the Gesell and the Piaget batteries to be excellent predictors of achievement. However, the authors cautioned that the results of this study do not support the use of the tests for school placement. They noted that a study placing a group of low scorers in a transitional class and comparing their school success with a group of low scorers not placed in a transitional class would be necessary to support the practice of using these tests for school placement. It would be extremely difficult to demonstrate that the differences between the two groups were due to their school placements. It was concluded that the GSRT might be a very good aid to making educational decisions for first grade (like grouping), but that it should be used with caution in making grade placement decisions.

Umansky, Warren, Paget, Kathleen D., Cohen, Linda R., "The Test - Retest Reliability of the McCarthy Screening Test," Journal of Clinical Psychology, July, 1981, 37:650-654.

The McCarthy Screening Test (MST) is composed of six of the subtests from the whole McCarthy battery. The researchers gave the test twice using the exact same procedure each time. The tests were one to two and a half months apart. Forty-nine percent of those at risk on the first test were not at risk on the second. The test results were compared to teacher referrals for special help. Teachers referred sixty-two percent of the children at risk on the first test and thirty-eight percent of the children at risk on both tests. Twenty-one percent of the children not at risk on either test were still referred. It was suggested that screening test results should be used in combination with teacher observation and judgment for truly effective identification of children at risk. The authors concluded that the MST should be used with caution.

Butler, Katherine G., "Test Review: Cambridge Kindergarten Screening Test", The Reading Teacher, October, 1985, 39:60-62.

The Cambridge Kindergarten Screening Test (CKST) was designed to help determine a child's current level of functioning in speech and language. It was field tested on kindergarten children in Cambridge, Massachusetts for a period of two years. While the CKST provided 111 items, some areas of language ability were assessed by only one or two items. No data on standardization, reliability, or validity were available. Butler felt that the CKST should be used only by a speech pathologist and with great caution.

Lindeman, David P., Goodstein, Henry A., Sacks, Arlene, Young, Clifford C., "An Evaluation of the Yellow Brick Road Test Through a Full Prediction - Performance Comparison Matrix," Journal of School Psychology, Spring, 1984, 22:111-117.

The researchers expressed concern for the early identification of children at risk of school failure and stated that educators "require validated screening instruments that accurately identify children who are at risk." They found it rare, however, for a test to report its validity or frequency of accurate and inaccurate predictions. This study compared the Yellow Brick Road Test (YBRT) to the Metropolitan and found a correlation of .67. It predicted those who perform well with one hundred percent accuracy, but misdiagnosed eighty-three percent of those who were predicted to do poorly. It was recommended that a prediction-performance comparison study be done on all screening instruments before they are considered valid and efficient.

Padget, S. Yancey, "Test Review: Miller Assessment for Preschoolers (MAP)", The Reading Teacher, November, 1985, 39:184-188.

Padget found that MAP consisted of twenty-seven items. Forty-four percent of the items assessed gross and fine motor skills, forty percent assessed visual-motor integration skills, and fifteen percent assessed language skills. Padget concluded from this that the MAP was based on a theory no longer held by most educators that visual-motor and motor skills related highly to learning disability. Research since then has confirmed that most learning disabilities are language based. The test was well designed and carefully standardized, but might best be used in a treatment center where therapists are working on motor and visual-motor skills.

Tsushima, William T., Onorata, Vincent A., Okumura, Frederick T., Sue, Dalton, "The Predictive Validity of the STAR: A Need for Local Validation," Educational and Psychological Measurement, Summer, 1983, 43:663-665.

The Screening Test of Academic Readiness (STAR) was given to fifty-nine incoming kindergarten boys at a private school for children with high IQs. The Metropolitan Readiness Test (MRT) and teachers' rankings were used to assess the predictive validity of the STAR. No relationship was found between the STAR and the MRT. The correlation between the STAR and the teachers' rankings was low. The study concluded that the STAR was not effective for screening children with high IQs and that local validation should be done before the test is used in other populations.

Szasz, Charles W., Baade, Lyle E., Paskewicz, Charles W., "Emotional and Developmental Aspects of Human Figure Drawings in Predicting School Readiness," Journal of School Psychology, 1980, 18:67-73.

This study focused on two factors of school readiness - intelligence and social-emotional adjustment. Koppitz' developmental and emotional scores were applied to the Human Figure Drawings of one hundred forty-one kindergarten children. Results were compared to the Metropolitan Readiness Test. Predictions were found to be no more reliable than chance predictions would be. It was recommended that this system not be used for preschool screening. The authors warned against the use of all screening instruments because of the difference between statistical significance and practical significance.

Cadman, David, MD, MSc, FRCP(C), Chambers, Larry W., PhD, Walter, Stephen D., PhD, Feldman, William, MD, FRCP(C), Smith, Kim, BSc, Ferguson, Ruth, BScN, "The Usefulness of the Denver Developmental Screening Test to Predict Kindergarten Problems in a General Community Population," American Journal of Public Health, October, 1984, 74:1093-1097.

The authors referred to the Denver Developmental Screening Test (DDST) as "the best known and most widely used developmental screening test" and credited this to its ease of administration. They studied the DDST for sensitivity, specificity, and predictive value. Sensitivity was found to be very low - six percent for academic and learning problems, five percent for behavior problems and other needs for special attention within the classroom, and ten percent for referrals to special education services. Specificity was ninety-nine percent. Estimates of predictive value ranged from thirty-one percent to sixty-two percent. The researchers suggested that the judgments of kindergarten teachers were a more appropriate assessment than any standardized test. The cost, the effectiveness, and the harm caused by false results were reasons given for communities reconsidering the use of preschool screening tests.

Bailey, Donald B., Jr., "Investigation of Learning Measures as Screening Procedures with Kindergartners," Psychology in the Schools, 1981, 18:489-495.

The use of a "one-time" test for assessment has been criticized for providing a very limited view of the child's abilities. In order to meet this criticism, Learning Potential (LP) was developed. Children were tested, given instruction in tasks tested, and retested. It was felt that those showing a high gain on the second test would be able to profit from a classroom situation. LP was thought to be a better predictor than IQ. Bailey's study compared the predictions of LP measures with the results of three readiness tests and found that the LP procedure did not yield more information than the single procedure. The study did not suggest that learning measures be used as screening procedures, but did suggest that they might be helpful when testers suspect that a child's initial score is not representative of his ability.

Harrison, Patti L., "Mercer's Adaptive Behavior Inventory, the McCarthy Scales, and Dental Development as Predictors of First Grade Achievement," Journal of Educational Psychology, 1981, 73:78-82.

The McCarthy Scales of Children's Abilities, the Adaptive Behavior Inventory, and an informal dental assessment were given to sixty-five kindergarten children to determine if dental development, motor development, and adaptive behavior played as great a role in predicting academic success as cognitive development. The same children were given the Metropolitan Achievement Test nine months later. The results showed that cognitive development is a good measure of future school success and educators would do well to seek an instrument that effectively measured it. The study further showed that dental development, motor development, and adaptive behavior did not accurately predict academic achievement and did not even make the prediction of cognitive development more accurate.

Hunt, Barbara M., "Chapter 766 Mandated Kindergarten Screening: Educational Planning for Children at Risk," Paper: New England Educational Research Organization, Inc., Lenox, Maryland, April 29-May 1, 1981 (ERIC ED 221 274).

A screening and placement system used in Quincy, Massachusetts between 1977 and 1980 was presented. In April, parents came to register their student and were given a screening appointment. Screening consisted of a hearing and vision test administered by the school nurse and a parent questionnaire that covered a history of pregnancy and delivery and a child behavior check list. Those identified high risk at this point were referred for medical attention and/or given the Hainsworth Preschool Screening System immediately. Others were given the Hainsworth in the fall. Moderate risk students were given further diagnostic evaluation and low risk students were carefully monitored by the school staff. Three thousand students were screened in this way from 1977-1980. The system failed to accurately identify less than three percent. Results of a longitudinal study being done were not available.

Schmidt, Sheldon, Perino, Joseph, "Kindergarten Screening Results as Predictors of Academic Achievement, Potential, and Placement in Second Grade," Psychology in the Schools, April, 1985, 22:146-150.

A battery of tests was used to screen 378 kindergarten students in a suburb of New York. Tests used were the Vane Kindergarten Test (Perceptual-Motor and Draw-a-Man), The Vane Test of Language (Receptive and Expressive), Otis-Lennon School Ability Test, Metropolitan Reading Test, and Metropolitan Math Test. The same children were retested at the end of second grade. The battery accurately predicted seventy-seven percent of the low achievers and seventy-three percent of the high achievers. The researchers suggested that the battery be used with caution because of the ability of kindergarten children to take tests as compared with that of older children, but they felt that children at the extreme ends of the test scores would profit from further analysis and special programs.

Lessler, Ken, PhD, Bridges, Judith S., PhD, "The Prediction of Learning Problems in a Rural-Setting: Can We Improve on Readiness Tests?" Journal of Learning Disabilities, February, 1973, 6:90-94.

The study group was given the Metropolitan Readiness Test, The Lee-Clark Reading Readiness Test, and the California Test of Mental Maturity. A subsample was also given a vocabulary test, a visual motor skills test, and a test for emotional maturity. The results showed that the readiness tests accurately predicted first grade success eighty-six percent of the time and second grade success seventy-three percent of the time. The other tests given did not increase the accuracy of the predictions of the readiness tests. Researchers concluded that there are several tests that can identify children with potential learning problems, that the prediction carries through to second grade, and that other instruments testing single areas add little to the predictive power of these tests.

Meisels, Samuel L.,Developmental Screening in Early Childhood: A Guide, National Association for the Education of Young Children, Washington, D.C., 1985, pp. 31-39.

Meisels reviewed several instruments in Appendix 1 of his book. The following were included:

1) The Denver Developmental Screening Test can be administered in twenty minutes by a teacher or assistant. It rarely over refers, but seriously under refers.
2) Early Screening Inventory takes fifteen to twenty minutes and can be given by a teacher or a carefully trained assistant. It has a .91 concurrent validity with McCarthy's Scales of Children's Abilities and a .82 predictive validity with first grade performance. It has moderate accuracy through second grade.
3) McCarthy Screening Test takes twenty minutes when given by a trained administrator. A .54 predictive validity with the Peabody Individual Achievement Test was found. The McCarthy is promising but not properly validated yet.
4) Minneapolis Preschool Screening Test can be given by a teacher or trained assistant in fifteen minutes. It has a .71 concurrent validity with the Stanford-Binet and a .70 predictive validity with the Metropolitan Readiness Test. It is a good predictor for a one year period.

Mitchell, James V., Jr.(Ed.),The Ninth Mental Measurements Yearbook, The Buros Institute of Mental Measurements, University of Nebraska, Lincoln, Nebraska, 1985, Vol.I&II.

The Mental Measurements Yearbook reviewed tests currently available. The following information was included by the editor. The Cambridge has no data concerning reliability or validity and no norms (p.255). The Lollipop has a predictive validity of .86 with the Metropolitan Readiness Test and a .58 correlation with teacher rating scales. It is not helpful in identifying specific deficits (pp.866-888). McCarthy selected subtests from the intelligence test to construct a screening test. The subtests do not correlate with achievement test scores. Two of the subtests favor females (pp.930-931). The Miller is a promising instrument but its predictive validity is unknown (p.978). The Gesell School Readiness Screening Test requires a lot of time and clinical expertise to administer. Its norms are outdated and there is a lack of data concerning validity and reliability (pp.610-611).

Stoner, Sue, Purcell, Karyn, "The Concurrent Validity of Teachers' Judgments of the Abilities of Preschoolers in a Daycare Setting," Educational and Psychological Measurement, 1985, 45:421-423.

This study was undertaken to see if the expense of a readiness test both in dollars and child/teacher time was really necessary. Teachers, unaware of the nature of the study, were asked to indicate whether each pupil could or could not do each task listed on the Daberon (a criterion referenced readiness test). Trained examiners administered the Daberon to the students a few days later. Researchers found a significant correlation between the scores on the Daberon and the teachers' ratings. They concluded that the informal assessments of checklists and rating scales were sufficient for determining the readiness of young children.

Stennett, R. G., Earl, L. M., "Early Identification System: Three-Year Followup of the Grade 1 Class of 1978-79," Report: London Board of Education, Ontario, 1982 (ERIC ED 220 193).

Each child was given an early identification (EID) rating based on teacher judgment. The status of the students three years later was significantly related to the EID rating they had received in Grade 1. Ninety-five percent of the students who had received a rating of 1 (ready for curriculum) were in the fourth grade. Fifty-four percent of the students who had received a rating of 3 (not ready for curriculum) had repeated a grade and thirty percent were enrolled in special education classes. Sixteen percent with an EID of 3 were in regular grade 4, but no data were available concerning any special help they had received within the regular program. Researchers felt it was clear that when a teacher considers a child unready to advance, careful attention to that teacher's recommendation should be given.

Bolig, John R., "The MRT vs. Ratings of Kindergarten Teachers as Predictors of Success in First Grade," Educational Leadership, April, 1973, 30:637-640.

A school district that used the Metropolitan Readiness Test (MRT) for predicting first grade readiness often used the scores to determine grade or group placement even when the scores were in conflict with teacher or parental opinion of the child's abilities. Serious questions raised about this practice prompted a study comparing the MRT to teacher ratings. While teacher ratings were shown to be significant predictors of first grade success, the MRT proved to be a better predictor. The MRT showed little difference between boys and girls, but teacher ratings showed a definite bias favoring girls.

Scourfield, Judith VanDyke, "Two Studies in the Use of Checklists to Predict Success in Kindergarten and Grade One," 1982 (ERIC ED 224 602).

Study I - Nine pre-kindergarten questions authored by Austin and Lafferty were given by the researcher to all eighty-three students registering for kindergarten in June. The same students were given the Metropolitan Readiness test the following March. A correlation of .76 was found.
Study II - In May of their kindergarten year, forty-eight students were given nineteen questions suggested by Ames. The first grade teachers were not made aware of the results and all students received instruction using the MacMillan basal.
The results: scoring 16-19 on the checklist - 90% on level
scoring 10-15 on the checklist - 70% in the primer
scoring 9 or less on the checklist - 83% did not complete the preprimers
As a result of the studies, Scourfield concluded that checklists are valid for use in making intervention or retention decisions.

Austin, John J., Lafferty, J. Clayton, Ph.D., The School Readiness Checklist, Research Concepts, Livonia, Michigan, 1963.

The School Readiness Checklist was developed by a group of psychologists to help parents answer the question if their child was ready to begin school and have a successful experience or not. Forty-three items based on child growth and development studies were selected. These items covered such areas as general activity related to growth, practical skills, remembering, general knowledge, and attitudes and interests. Lafferty and Clayton made three generalizations concerning readiness: "1)Learning occurs most effectively when the child has reached a psychological and physical stage of readiness to learn. 2) The stage of readiness is not effectively predicted by the child's chronological age. 3) Most of the effort directed toward learning before readiness occurs is lost and is often detrimental to later effective learning of the task." Parents were urged to find out the reasons if they determined that their child was not ready for school.

Uphoff, James K., Gilmore, June, "Pupil Age at School Entrance - How Many Are Ready for Success?", Young Children, January, 1986, 41:11-15.

Two hundred seventy-eight elementary school age children in Hebron, Nebraska were studied. Those with summer birthdays entering school when first eligible (SC) were compared to those with summer birthdays but held back one year by their parents (HBSC). Seventy-five percent of the school's retainees were SC. None of the HBSC experienced grade failure. HBSC had higher scores on the Iowa Test of Basic Skills. SC were found to be off task 2-3 times more often than HBSC. A direct correlation was found between pupil age and ability to stay on task. A similar study was done in Wapokoneta, Ohio. Seven years of data comparing the teacher-assigned grades and the scores on the Iowa Test of Basic Skills of the two groups showed the older group at an advantage. Five recommendations were made: 1)states should set cutoff dates for school entrance in late summer or early fall, 2)pupils should be screened for readiness, 3)parents should be encouraged to keep their children at home until ready, 4)academic pressure in the early grades should be reduced, 5)developmental kindergartens and/or first grades should be available for unready students.

Cansfield, Dr. William B., "Early School Success," Early Years, January, 1986, 16:30-32.

Dr. Cansfield, Assistant Superintendent of the Grand Haven Public Schools in Michigan, reported on the Developmental Kindergarten (DK) the system has had for twelve years. He stated that 16-18% of the students chronologically ready for kindergarten are recommended and participate in the program. The DK presents readiness experiences "in a relaxed manner, free of inappropriate academic pressures and expectation." Most participants enter Regular Kindergarten (RK) the following year. In 1982 Grand Haven used "Early Prevention of School Failure," a nationally validated program, to screen and follow up children in the DK. A study done two years later showed the 1982 DK students (then in first grade) performing as well or better than the RK students (then in second grade). The data were based on teacher appraisal of general language performance, attitude toward school, attitude toward self, attendance, overall school performance, and provision of special support services. Cansfield pointed out that the results were very positive for a group of students that were "in high risk of being unsuccessful and of having poor self-esteem."

Solem, Maizie R., "Junior First Grade: A Year to Get Ready," Phi Delta Kappan, December, 1981, 63:283-284.

Kindergarten students in Sioux Falls, South Dakota were given the Yellow Brick Road Screening Test in the fall and the Metropolitan Readiness Test in May. The results of these instruments combined with teacher judgment were used to identify children at risk of failing first grade. These children were placed in a junior first grade where emphasis was placed on math and reading readiness skills, oral language, listening, following directions, healthy self-concept, etc. First grade teachers rated the program highly. They found that twenty-eight percent of the students who had experienced junior first grade fell into the top quarter of their class, while only two percent fell into the lowest. This was in 1980. The program began in 1970 with one class of fifteen students and expanded to five classes servicing seventy-five children.

Frick, Ralph, "In Support of Academic Redshirting," Young Children, January, 1986, 41:9-10.

Redshirting is a practice in college athletics whereby a promising player sits out a year. With an extra year's growth and physical maturation, the athlete is able to achieve far beyond what he/she could have the previous year. This is thought of as a positive decision. It in no way hints of failure. Frick advocated that we do the same thing for young children academically. He stated that many children do not really vary in ability, but in time needed to achieve academic tasks. He suggested that we combine the idea of redshirting with the flexibility of the time spent in primary grades. The L. J. Campbell School in Atlanta is attempting to put Frick's theory into practice. They divided their kindergarten curriculum into four sections. Each child moves through the four sections at his own pace. If the time taken is one school year, the child moves on. If more time is required, that time is given without failure being attached to it. The plan is to eventually have the K-3 curriculum divided into thirteen parts without grade level distinction. Under this system, it would be possible for a child to master three of the four units associated with kindergarten the first year, master unit four and all of the units associated with first grade the second year when he is more developmentally ready, and end up with the children he started with. Frick did not hold out a lot of hope for the system, but felt that it would be beneficial to children if it could be instituted.

SUMMARY

Some research has been done concerning the effects of age on school readiness. Ilg and Ames, based on their work at the Gesell Institute of Human Development, made a strong case for placing a child in school according to developmental age rather than chronological age. They cited the Weston study which found the readiness of thirty to forty percent of the children tested questionable. Wood, Powell, and Knight tested the validity of the Gesell School Readiness Test and found it effective in predicting school success or failure. Senior pointed out that the developmentally young child may experience frustration that leads to behavior associated with learning disabilities. Friesen cited an Oklahoma study which concluded that developmental age is a more valid indicator of school readiness than chronological age.

However, DiPasquale, Moule, and Flewelling found that the effect of birthdate on school success pertained only to boys and disappeared after the primary grades. Hebbler also found the relationship between month of birth and skill level to be minimal. May and Welch concluded from their study that being overplaced did not hurt a child and that being given an extra year to mature did not help. They indicated that the developmental placement theory needed more objective research. Gredler cited a study of children in ten different schools entering school with equal predictions of reading success. The differences in actual performance pointed out that the varying factor might be the school rather than the child. Gredler called for more emphasis on individual needs in curriculum planning.

Screening programs to determine school readiness have greatly increased. Gallenani, O'Regan, and Reinherz found several instruments made correct classifications, but warned about the dangers of false negatives and false positives. Hutchins made very favorable conclusions for screening such as increased teacher self-confidence and program legitimacy. Moore and Sunal found accurate predictions but stated that extensive follow-up would be needed to validate the procedure. Book's findings supported the predictive validity of the battery he studied, but he still warned that the results should not be used without good teacher judgment. He recommended that screening not be done unless it resulted in a change in educational programs. Meisels pointed out differences between developmental screening tests and tests for school readiness. He warned against possible misuses of the test results. Most of these researchers suggested that screening be thought of as a beginning to be followed by assessment and intervention. The Michigan study defined screening as "a process of confirming the development of a child" and called for the Department of Education to provide local school districts with a list of recommended screening instruments.

Reviews of several screening procedures were presented. Abrahamson and Bell found the School Readiness Section of the Early Detection Inventory to be an effective instrument that called for more research. Kaplan compared the Vane Kindergarten Test to the Wechsler Scale of Intelligence and found strong correlation. He concluded that the Vane may be an effective

screening instrument. Chew and Morris made a positive recommendation for the Lollipop Test, citing its non-threatening, individual nature. Ilg and Ames explained the steps in the Gesell School Readiness Tests(GSRT). Kaufman and Kaufman found the GSRT to be an excellent predictor of achievement but felt it should not be used to make grade placement decisions. The McCarthy Screening Test was researched by Umansky, Paget, and Cohen. They stated that it should be used with caution and not without teacher observation and judgment. Butler found no data concerning the standardization, reliability, or validity of the Cambridge Kindergarten Screening Test. She felt that it should be used only by speech pathologists and with caution. Lindeman, Goodstein, Sacks , and Young compared the Yellow Brick Road Test to the Metropolitan. They found high correlation between the two instruments, but also found a high percentage of misdiagnosis. They called for more prediction-performance studies for all screening tests. Padget found the Miller Assessment for Preschoolers to be based on the theory that visual-motor and motor skills are highly related to learning disabilities. This theory is no longer held by most educators. While the Miller was carefully standardized, Padget did not feel it was appropriate for screening for school readiness. Tsushima, Onorata, Okumura, and Sue concluded that the Screening Test of Academic Readiness was not effective with a population of high IQs and needed local validation before being used. Koppitz' Human Figure Drawings were compared to the Metropolitan by Szasz, Baade, and Paskewicz. They found its predictions to be no better than chance predictions. They warned against the use of screening

instruments in general. The Denver Developmental Screening Test is well known and widely used. Cadman, Chambers, Walter, Feldman, Smith, and Ferguson studied it and found it no more favorable than the judgments of kindergarten teachers. They advised communities to reconsider the use of preschool screening tests. Bailey did a study on three readiness tests to see if testing, giving instruction, and retesting would improve the results. This procedure did not yield more information than the single test prediction did. Harrison, Hunt, Schmidt and Perino, and Lessler and Bridges all did studies on screening procedures using a battery approach. Hunt found the procedure she reviewed had only three percent inaccurate assessments. The others expressed caution and felt that the additional procedures did not necessarily improve the results. Meisels and The Ninth Mental Measurements Yearbook reviewed several other instruments. Lack of information concerning validity was consistently pointed out.

Checklists are sometimes used to determine school readiness rather that standardized tests. Stoner and Purcell compared teachers' assessments of a child's ability to do each task on the Daberon (a readiness test) and then administered the Daberon. They found a significant correlation between teachers' ratings and the Daberon. Stennett and Earl compared teacher judgment to actual achievement and found enough accuracy to conclude that teacher recommendations should be given careful consideration. However, Bolig found the Metropolitan Readiness Test to be a better predictor of success than teacher ratings. Teachers in his study showed a bias favoring girls, while the Metropolitan did not. Scourfield conducted two studies. One compared student

checklists to the Metropolitan and the other to reading level achieved. The studies demonstrated that the checklists were valid for use in making placement decisions. Austin and Lafferty published a checklist for parents to use in determining their own child's readiness for school. These were used in Scourfield's first study. The checklist in the second study was suggested by Ames.

Determination that a child is not ready for kindergarten or first grade necessitates providing a plan to get him ready. Uphoff suggested that states mandate a late summer or early fall cutoff date for school entrance, that parents be encouraged to keep their children at home until they are ready, that academic pressure in the lower grades be reduced, and that developmental kindergartens or first grades be made available. Cansfield reported on the results of developmental kindergartens in Grand Haven, Michigan. After two years, the students were reported to be doing as well or better than their age mates who had gone into regular kindergarten. Cansfield considered this a positive thing for a group who had been considered high risk. Children considered at risk of failing first grade are assigned to junior first grade in Sioux Falls, South Dakota. Solem found that eighteen percent of those who had junior first grade were in the top quarter of their class during regular first grade the following year. Only two percent fell into the bottom quarter. Frick proposed academic redshirting by allowing children to take the primary grades at their own pace without grade level distinction. His theory was begun at the L. J. Campbell School in

Atlanta. The program has not been fully initiated yet and so results are not available.

CONCLUSIONS

Most children are ready to begin kindergarten at age five and first grade at age six. Some are not. Those that are not ready have a developmental age that does not match their chronological age. Proponents of developmental placement believe that all children should be screened and that those showing developmental lags should delay school entrance or grade advancement.

The problem in trying to place children according to their developmental age is finding a screening device or procedure that accurately identifies that age. An instrument that produces false positives causes children to be mislabeled and given remediation or special services they have no need for. An instrument that produces false negatives causes children to be put into the regular program when they really needed special help. The results of screening tests should never be used exclusively to determine school placement. If they are to be used, they should be used to support teacher judgment. Observation of behavior by parents and teachers, checklists, and ranking scales serve as an effective guide as to which child is developmentally ready and which is not. Standardized tests would be better used to confirm a teacher's judgment than to screen the entire kindergarten population.

Developmental kindergartens to provide planned growth for youngsters not ready to begin and developmental first grades to emphasize necessary skills are probably a good idea. Frick's theory of a non-graded primary being tested in Atlanta is probably an excellent plan. The research on the results that these

programs produce is simply not extensive enough for them to be broadly recommended.

There is a great need for objective research concerning the issue of preschool screening. Screening instruments that are presently being used need to be validated. Much more data should be collected and analyzed from the developmental programs already in existence. Until this has happened, teachers need to continue doing what good teachers have always done: meet the child where he is and provide strategies for as much growth as he can handle.

RECOMMENDATIONS

1. School corporations should engage in extensive parent training concerning the types of behaviors that indicate school readiness. Parents need to be aware that keeping their child home an extra year is an option.
2. Kindergarten teachers need to develop a very specific checklist of behaviors for themselves and parents to use as they observe the child throughout the kindergarten year.
3. A standardized test, carefully selected due to its validity, should be given in the spring to those students that the kindergarten teacher ranks as unready. This will give the teacher confidence in her decision and support in talking to parents.
4. The first grade teacher must be prepared to have some students enter her class unprepared for first grade. It will be her job to provide them with readiness training and decide when special services are needed.

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BACKGROUND

Name: Linda J. Wruble

Education: Indiana University at South Bend
Major: Elementary Education

Experience: Teacher, Plymouth Community Schools
Third Grade - one year
Fourth Grade - one year
First Grade - four years

Rationale: I began this study hoping to find a screening instrument or procedure that I could recommend to my corporation. I felt that something needed to be done to prevent the frustration the student and I experience when I receive a student not ready to begin first grade. I concluded that no such instrument currently exists. I believe that each student must be carefully observed and worked with before a judgment concerning his placement can be accurately made.